FavorPrep™
Gel Purification Mini Kit

User Manual

Cat. No.: FAGPK 001 (50 Preps)
FAGPK 001-1 (200 Preps)

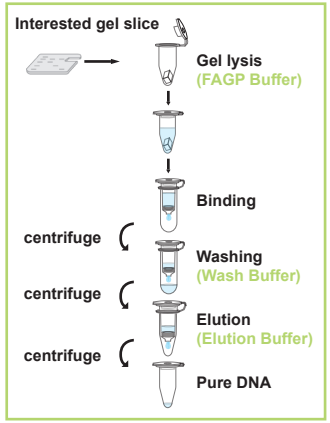
For Research Use Only

v.1102

Kit Contents:

	FAGPK001	FAGPK001-1
FAGP Buffer	80 ml	160 ml X 2
Wash Buffer (concentrated)	15 ml*	30 ml** X2
Elution Buffer	5 ml	20 ml
FAGP Column	50 pcs	200 pcs
Collection Tube	50 pcs	200 pcs

*Add 60 ml ethanol (96-100%) to Wash Buffer when first open.
**Add 120 ml ethanol (96-100%) to each Wash Buffer when first open.



Specification:

Sample size: up to 400 mg agarose gel
Recovery: 70-85%. (100bp~10Kb)
Elution volume: 40 µl
Handling Time: within 25 min

Important Notes:

1. Buffers provided in this system contain irritants. Wear gloves and lab coat when handling these buffer.
2. Excise the extra agarose gel to minimize the size of the gel. (The maximum size of the gel slice is 400 mg)
3. Add the indicated volume of ethanol (96%~100%) to Wash Buffer when first open.
4. All centrifuge steps are done at full speed (13,000 rpm or 17,900 x g) in a microc-entrifuge.

Genernal Protocol:

Please Read Important Notes Before Starting The Following steps.

HINT: Prepare a 55 °C dry bath or water bath for step 4.

1. Excise the agarose gel containing relevant DNA fragments with a clean scalpel.
   - Remove the extra agarose gel to minimize the size of the gel slice.
   - The optimal size of the gel slice is around 200 mg.

2. Determine the weight of the gel slice and transfer it to a clean tube. (not provided)
   - The maximum size of the gel slice is 400 mg.

3. Add 3 volumes of FAGP Buffer.
   - For example, Add 600 µl of FAGP Buffer to 200 mg of gel slice.
   - Important ! For >2% agarose gels, Add 6 volumes of FAGP Buffer.

4. Incubate at 55°C for 10~15 min and vortex the tube every 2-3 min until the gel slice dissolved completely.
   - During incubation, interval vortex can accelerate the gel dissolved.
   - Important ! Make sure that the gel slice has been dissolved completely before proceed the next step.

5. Vortex the sample mixture for 5 seconds. Cool down the sample mixture and place a FAGP column into a Collection Tube.

6. Transfer 800 µl of the sample mixture to the FAGP Column. Centrifuge for 30 seconds, discard the flow-through and place the FAGP column back to the Collection Tube.
   - If the sample mixture is more than 800 µl, repeat the step 6 for the rest sample mixture.

7. Add 750 µl of Wash Buffer (ethanol added) to the FAGP Column. Centrifuge for 30 seconds, discard the flow-through and place the FAGP column back to the Collection Tube.
   - Make sure that ethanol (96~100%) has been added to Wash Buffer when first open.
   - If the downstream application is very salt-sensitive, stand the FAPG Column for 3 min after adding Wash Buffer, before centrifuging.

8. Centrifuge for an additional 2 min to dry the FAGP column.
   - Important Step! This step will avoid the residual liquid to inhibit subsequent enzymatic reactions.

9. Place the FAGP Column into a new 1.5 ml microcentrifuge tube (not provided).

10. Add 40 µl of Elution Buffer or ddH2O (pH7.0~8.5) to the membrane center of the FAGP Column. Stand the FAGP Column for 1 min.
    - Important step ! For effective elution, make sure that the elution solution is dispensed onto the membrane center and is absorbed completely.
    - *Important : Do not elute the DNA using less than suggested volume (40µl). It will lower the final yield.*

11. Centrifuge for 1 min to elute the DNA.

Troubleshooting

The gel slice is hard to dissolve

- Agarose gel of high percentage (> 2 %) is used
  → Add 6 volumes of FAGP Buffer to 1 volume of the gel slice.
- The size of the gel slice is too large
  → If the gel slice is more than 400 mg, separate it into multiple tubes.

Low or none recovery of DNA fragment

- The column is loaded with too much agarose gel.
  → The maximum volume of the gel slice is 400 mg per column.
  → Make sure that the gel slice has been dissolved completely before proceed the next step
- Elution of DNA fragment is not efficient
  → Make sure that the volume of elution solution is ≥ 40 µl.
  → Make sure that the elution solution has been completely absorbed by the membrane before centrifugation.
- The size of DNA fragment is larger than 5 Kb.
  → Preheat the elution solution to 60 °C before use.

Eluted DNA contains non-specific DNA fragment

- Contaminated scalpel
  → Using a new or clean scalpel.
- DNA fragment is denatured
  → Incubate eluted DNA at 95 °C for 2 min, then cool down slowly to reanneal denatured DNA.

Poor performance in the downstream applications

- Salt residue remains in eluted DNA fragment.
  → Wash the column twice with Wash Buffer
- Ethanol residue remains in eluted DNA fragment.
  → Do discard the flow-through after washing with Wash Buffer and centrifuge for an additional 3 min.